COLD DRAWN HIGH CARBON SPRING WIRE

ASTM A228 Music wire / piano wire

Cold drawn high carbon spring wire

230–399 ksi	Ø0.1–6 mm	0.70–1.00 % C	EN 10204 3.1
Tensile by diameter	Drawn size range	Base chemistry	Every lot

GRADE AND STANDARDS

Item	Detail
Designations	ASTM A228 / UNS K08500 / music wire / piano wire
Standards	ASTM A228 / A228M; Fed QQ-W-470
Delivery condition	Cold drawn, bright finish, in coils or straight lengths
Route	EAF + ladle refining, controlled rolling, patenting, multi-pass drawing
Typical use	Small coil springs, torsion springs, piano strings, fishing leaders, cable
Certificate	EN 10204 3.1 with chemistry, tensile and torsional test

CHEMICAL COMPOSITION (% BY MASS)

C	Mn	Si	P	S
0.70–1.00	0.20–0.60	0.10–0.30	≤0.025	≤0.030

MECHANICAL PROPERTIES

Diameter mm	Tensile ksi	Tensile MPa	Torsion test
0.20	399–441	2750–3040	Per ASTM A228
0.50	340–380	2340–2620	Per ASTM A228
1.00	300–340	2070–2340	Per ASTM A228
3.00	240–280	1650–1930	Per ASTM A228

SUPPLY RANGE

Form	Size range	Tensile range
Cold drawn wire, coil	Ø0.10–1.00 mm	320–399 ksi
Cold drawn wire, coil	Ø1.00–3.00 mm	260–340 ksi
Cold drawn wire, coil	Ø3.00–6.00 mm	230–280 ksi
Straight lengths	Ø0.5–6.00 mm	Per diameter

INSPECTION AND CERTIFICATION

- EN 10204 3.1 with chemistry and tensile test per coil
- Torsion test result - the fastest indicator of a drawing defect
- Surface condition: bright, or galvanised on request
- Coil weight and cast/heat number on the tag
- Stress-relief recommendation for the forming operation

ORDERING INFORMATION

- Grade and standard
- Form and size - thickness x width x length, or diameter and cut length
- Quantity in pieces or kilograms
- Delivery condition and hardness window
- Certificate and inspection requirements

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EN 10204 3.1 mill certificate with every shipment
Chemistry · mechanical properties · test results · heat number

Hardness map and ultrasonic inspection on request.
Values are typical for the grade; the certificate of the actual heat governs.